

AMENDMENTS TO THE CLAIMS

Please cancel claims 1-30 without prejudice or disclaimer of their underlying subject matter.

Please add said following new claims.

31. (New) An apparatus for vibration isolation comprising:

an intermediate plate supported on a base by spring elements with specified positive spring characteristics;

a vibration-isolating table supported on said intermediate plate; and

a load supporter with positive spring characteristics between said vibration-isolating table and said base.

32. (New) The apparatus for vibration isolation as claimed in claim 31, wherein the vibration-isolating table supported on said intermediate plate by a magnetic levitation mechanism with zero-power characteristics and specified negative spring characteristics having permanent magnets and electromagnets.

33. (New) The apparatus for vibration isolation as claimed in claim 32, wherein said vibration-isolating table supported on said intermediate plate by said spring elements with positive spring characteristics arranged in parallel with said magnetic levitation mechanism.

34. (New) The apparatus for vibration isolation as claimed in claim 32, wherein said intermediate plate is further supported on said base by a linear actuator.

35. (New) The apparatus for vibration isolation as claimed in claim 32, wherein said load supporter includes said spring elements with positive spring characteristics and a damper of a specified damping rate, said damper being in parallel with said spring elements.

36. (New) The apparatus for vibration isolation as claimed in claim 32, wherein said load supporter includes pneumatic springs with positive spring characteristics.

37. (New) The apparatus for vibration isolation as claimed in claim 32, wherein damper of a specified damping rate is between said base and said intermediate plate in combination with said spring elements with positive spring characteristics.

38. (New) The apparatus for vibration isolation as claimed in claim 32, wherein attraction of said electromagnets of said magnetic levitation mechanism is adapted to be variable with changes in said load acting on said vibration-isolating table.

39. (New) The apparatus for vibration isolation as claimed in claim 32, wherein said halves of said base and vibration-isolating table are connected by their respective tie members, said halves of said base and said vibration-isolating table being arrayed alternately, said intermediate plate being between one half of said base and one half of said vibration-isolating table.

40. (New) The apparatus for vibration isolation as claimed in claim 32, wherein said base is a floor of said apparatus.

41. (New) The apparatus for vibration isolation as claimed in claim 32, wherein at least one each of the base, intermediate plate or vibration-isolating table are modularized into one functional unit.

42. (New) The apparatus for vibration isolation as claimed in claim 31, wherein the vibration-isolating table supported on the intermediate plate by the supporter with specified negative spring characteristics comprising the actuator and the controller.

43. (New) The apparatus for vibration isolation as claimed in claim 42, wherein said intermediate plate is further supported on said base by a linear actuator.

44. (New) The apparatus for vibration isolation as claimed in claim 42, wherein the spring elements with positive spring characteristics are in parallel with the supporter, the supporter being between the intermediate plate and the vibration-isolating table.

45. (New) The apparatus for vibration isolation as claimed in claim 42, wherein halves of said base and the vibration-isolating table are connected by tie members, the halves of the base and the vibration-isolating table being arrayed alternately, the intermediate plate being between one half of the base and one half of the vibration-isolating table.

46. (New) The apparatus for vibration isolation as claimed in claim 42, wherein said base is the floor of the apparatus.

47. (New) The apparatus for vibration isolation as claimed in claim 42, wherein at least one each of the base, intermediate plate or vibration-isolating table are modularized into one functional unit.

48. (New) A method for vibration isolation comprising:

connecting in series two individual supporters with positive and negative spring characteristics, a supporter set including said two individual supporters; and

installing a load supporter between the base and the second member in parallel with said supporter set, said load supporter having positive spring characteristics,

wherein nearly infinite rigidity adequate for preventing direct disturbances is achieved and vibration from the base is isolated due to the functioning of a first member installed between a base and a second member.

49. (New) A method for vibration isolation comprising:

isolating vibration transmitted from a first member to a second member, the vibration being isolated by a magnetic levitation mechanism and a load supporter, the magnetic levitation mechanism having zero-power characteristics and includes permanent magnets and electromagnets that are installed between the first member and the second member, and the load supporter has positive spring characteristics and is between the base and the second member;

and

supporting a load acting on the second member, the load being supported by said magnetic levitation mechanism and said load supporter,

wherein vibration transmitted from the base to the first member is isolated by the springs installed between the base and the first member.